

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	: 10/693,609	Confirmation No.:	6477
Applicant(s)	: Sabine Short et al.	Examiner:	Christopher M. Babic
Filed	: October 23, 2003	Customer No.:	22896
TC/A.U.	: 1637		
For	: <b>METHODS AND COMPOSITIONS FOR DETECTING TARGETS</b>		

**RESPONSE TO EXAMINER'S INTERVIEW SUMMARY (FORM PTOL-413)**

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Sir:

Applicants thank Examiner Babic for the interview on September 15, 2006. In his description of the interview, the Examiner noted:

“Applicant’s representative pointed the Examiner to where the amended claim was believed to differ from the teachings of Barany. Applicant specifically pointed to claim 1, line 15 as amended wherein the claim requires that at least one primer specific portion of the two probe sets probe sets (i.e. 5’ or 3’) has a different sequence from one another.”

As a first matter, Applicants note that the Examiner’s language “at least one primer specific portion of the two probe sets probe sets” appears to contain an unintended typo. Specifically, the Examiner inadvertently engaged in the redundant use of “probe sets.” Applicants will assume, for the sake of the rest of this response, that the Examiner intended to say “at least one primer specific portion of the two probe sets,” and did not intend the second use of the term probe sets.

Applicants agree that during the interview Applicant's representative did point to line 15 of amended claim 1. However, Applicants respectfully submit that this was not the entirety of the substance of Applicant's remarks.

Specifically, the Examiner fails to mention in the Summary (Form PTOL-413) important additional aspects of the interview.

During the interview, Applicant also pointed to Figure 10 of the published application (US 2004/0235005A1), and indicated that here too, along with the amended claim 1 language commencing at line 15, provides an aspect of novelty and non-obviousness over the Barany reference.

Considering the amended Claim 1 language at line 15, in light of Figure 10, Applicant expressed the view that the claimed invention was novel and non-obvious over Barany. Applicants did not further belabor the discussion, believing the figure, in light of the cited claim language, was sufficient explanation. Applicants apologize that the brevity had the unintended effect of lacking sufficient explanation of the differences between Applicants' amended claim 1 and Barany.

Applicants now wish to further clarify how Figure 10 relates to the amended claim language, and how amended Claim 1 is novel and non-obvious in view of Barany, as well as the other cited references. Specifically, the collection of PCRs of Figure 10 relate to the following language of amended Claim 1, found in line 18 of page 6 through line 13 of page 7 provides:

“ . . . forming a first amplification reaction composition in a first amplification reaction mixture comprising: . . . a first primer set, the first primer set comprising (i) a first primer comprising the sequence of the 5' primer-specific portion of the first ligation product, and (ii) a second primer comprising a sequence complementary to the sequence of the 3' primer-specific portion of the first ligation product;

forming a second amplification reaction composition in a second amplification reaction mixture comprising: . . . a second primer set, the second primer set comprising (i) a first primer comprising the sequence of the 5' primer-specific portion of the second ligation product, and (ii) a second primer comprising a sequence complementary to the sequence of the 3' primer-specific portion of the second ligation product. . . ”

As discussed during the interview, and provided again for convenience below, the amended claim language starting at line 15, and continuing through line 8 of the following page, indicates:

. . . wherein the sequence of the 5' primer-specific portion of the first probe of the first probe set is different from the sequence of the 5' primer-specific portion of the first probe of the second probe set, wherein the sequence of the 3' primer-specific portion of the second probe of the first probe set is different from the sequence of the 3' primer-specific portion of the second probe of the second probe set, or both the sequence of the 5' primer-specific portion of the first probe of the first probe set is different from the sequence of the 5' primer-specific portion of the first probe of the second probe set and the sequence of the 3' primer-specific portion of the second probe of the first probe set is different from the sequence of the 3' primer-specific portion of the second probe of the second probe set, and wherein the first target nucleic acid sequence is different from the second target nucleic acid sequence;

Thus, Applicants assert that the claimed invention is novel in light of Barany. In short, Barany does not teach performing a multiplexed ligation reaction followed by a collection of different PCRs, where the collection of different PCRs use primers that were encoded in the primer-specific portions of the ligation probes. Barany simply does not teach this combination of encoding different primer-specific portions in the ligation probes of a multiplexed ligation reaction, followed by decoding the ligation products in a collection of different PCRs using primers corresponding to the encoded target-specific primer portions.

Neither the Wittwer reference (U.S. Patent 6,303,305), nor the Godfrey reference (Journal of Molecular Diagnostics, 2000, No. 2: pp 84-91), nor any of the combinations of Wittwer and Godfrey and Barany, teach applicants' claimed invention.

Reconsideration in light of these remarks is respectfully requested. In the event they are not entered, Applicants request a phone call to ensure appropriate steps can be taken to proceed with prosecution in an RCE.

Date: October 20, 2006

Respectfully submitted,



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